CENTER FOR INTELLIGENT COMPUTER TOOLS

CENTER
The Center for Intelligent Computer Tools was first funded in 1996 to facilitate the creation of computer tools including interactive image segmentation and composition, automated creation of digital (microfilm) libraries, and semi-automated creation of virtual environments from real world images.

TECHNOLOGY
The technology development effort is concentrated in the following areas: intelligent scissors / paint which performs image segmentation and composition; color quantization and dithering, which represents full color images with limited palette and no visual loss; resolution enhancement, making bad images good and good images better; document understanding – parsing document components and recognizing content; automated morphing between images for animation, video compression etc.; virtual environments to create realistic virtual environments from real world images and direct surface rendering; image blending for automatic shape blending and image object blending.

ACCOMPLISHMENTS
Algorithms for intelligent paint segmentation and localization were updated with high level visual effects. The prototype digital microfilm parser / browser was enhanced with significant new tools. The virtual environment terrain database for the Virtual Olympics was expanded and terrain details such as buildings and ski runs were added. Additional license agreements were signed with Adobe Systems, Park City Entertainment, the LDS Church, and S3 Corporation

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Can You Imagine...

. . . careening down an Olympic bobsled run, fully aware of the twisting turns and angles of the sled, while watching the surrounding landscape rush by, all on the screen of your computer with every visual sensation artificially created by software.

THE CENTER DEVELOPS INTELLIGENT COMPUTER TOOLS FOR THE CREATION, MANIPULATION, AND PRESENTATION OF DIGITAL IMAGES.
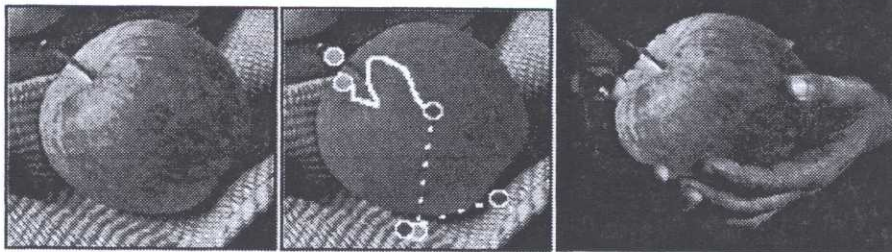
Intelligent Paint starts by pressing the mouse button on one side of the object to be extracted (middle frame). The mouse is then dragged to the opposite side of the object and released. The "painted" object can then be pasted into another picture (right frame).